## **CLAIMS**

## What is claimed is:

- 1. An antimicrobial composition, comprising a combination of a carbohydrate and an antimicrobial agent.
- 2. The composition of claim 1, wherein said carbohydrate originates from chitan.
- 3. The composition of claim 2, wherein said carbohydrate is N-acetylglucoseamine glucosamine.
- 4. The composition of claim 1, wherein said antimicrobial agent is a broad spectrum antibiotic.
- 5. The composition of claim 4, wherein said broad spectrum antibiotic is pyrithione.
- 6. An antimicrobial composition having the following structural formula:

$$[(NAGA)_X (GA)_Y (PR)_Z]_N$$

wherein x is from about 0.01 to about 0.3, y is from about 0.3 to about 0.98 and z is from about 0.01 to about 0.3 molar fractions, wherein  $x+y+z\sim1$ , and N has a value between about 1 and about 100.

- 7. The composition of claim 6, wherein said composition has a molecular weight in range of about 1 kDa to about 150 kDa.
- 8. The composition of claim 1, wherein said composition further comprises between about 0.01% to about 1% of decyl polyglucose.
- 9. A method for treating a dermatological condition, comprising administering to a subject in need thereof an effective amount of a composition having N-acetyl-glucoseamine-glucosamine-pyrithione.
- 10. The method of claim 9, wherein said dermatological condition is acne or candida.

- 11. The method of claim 10, wherein said effective amount for treating said acne is 0.1 mg/mL.
- 12. The method of claim 10, wherein said effective amount for treating said candida is from about 0.05 to about 0.7 microgram/mL.
- 13. The method of claim 9, wherein said composition further comprises between about 0.01% to about 1% of decyl polyglucose.
- 14. The method of claim 9, wherein said composition is topically applied to an afflicted region of said subject.
- 15. A method for treating a dermatological condition comprising administering to a subject in need an effective amount of:

$$[(NAGA)_x (GA)_y (PR)_z]_N$$

wherein x is from about 0.01 to about 0.3, y is from about 0.3 to about 0.98 and z is from about 0.01 to about 0.3 molar fractions, wherein  $x+y+z\sim1$ , and N has a value between about 1 and about 100.